REMARKS/ARGUMENTS

After the foregoing Amendment, Claims 1-16 are currently pending in this application. Claim 1 has been amended to more distinctly claim subject matter which the Applicants regard as the invention. Support is found in paragraph [0023], "After the PCF 32 determines that the UE 31 will perform the RSVP function, it sends the GGSN 34 a message indicating that the UE 31 controls the RSVP function, ... The GGSN 34 forwards the message to the UE 31 ...." Applicants submit that no new matter has been introduced into the application by this amendment.

Claim Rejections - 35 USC § 103

Claims 1-16 stand rejected under 35 U.S.C. 103(a) as being /unpatentable over Widegren et al. (Widegren, 6,621,793) in view of Williams et al. (Williams 2002/0133600).

The present application sets forth a novel method of unambiguously assigning and coordinating responsibility for Resource Reservation Protocol (RSVP) signaling, when both a UE and a GGSN are RSVP enabled. This arrangement has many benefits. For example, when the UE performs its own RSVP signaling, a considerable portion of its air interface resources are consumed by the RSVP signaling. These air interface resources can be conserved by allowing the GGSN to act as an RSVP proxy for the UE, and perform RSVP signaling for the UE. However, without a clear assignment of signaling responsibility, communication problems can arise. One possible result is that both the UE and the GGSN believe they are responsible for the RSVP signaling, and both provide essentially the same

signaling (a so-called race condition). This can lead to duplicative and inefficient use of communication resources and increased collisions. On the other hand, a different possible result of not assigning clear RSVP signaling responsibility is that both the UE and the GGSN believe the other is responsible, and neither provides the RSVP signaling required to maintain the QoS of the communication session. The present application provides for unambiguously assigning and coordinating responsibility for Resource Reservation Protocol (RSVP) signaling when both a UE and a GGSN are RSVP enabled.

The present application also allows for the reassignment of RSVP signaling responsibility. This capability can be useful, for example, where the GGSN's resources become congested. If the GGSN has been assigned to act as the UE's RSVP proxy, it may be desirable to reassign RSVP signaling responsibility back to the UE.

Thus, both the UE and the GGSN are RSVP enabled, and either the UE or the GGSN can be responsible for the RSVP signaling. According to the present application, the decision of which is responsible can be made either at a Policy Control Function (PCF) on the network, or by the GGSN, or by negotiation between the GGSN and the UE. In every case, only one device at a time is permitted to be responsible for making the RSVP responsibility decision. When the decision is made, both the UE and the GGSN are notified as to which of them is responsible for the signaling.

In contrast to the present application, Widegren is directed to providing filtering and gating control of network data flow using policy mechanisms. In Widegren, the UE sends a request to a GGSN to establish a network bearer service between the UE and a remote host. A policy control function (PCF) receives from an application server filtering data derived from session data for the upcoming session.

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The GGSN interrogates the PCF to initialize a gate, which is opened or closed to control access to network resources. Whether or not data is permitted to flow is controlled by event triggers. Thus, the GGSN acts as a gate, but not as an RSVP proxy. Widegren does not recognize that RSVP signaling can originate in either a UE or a GGSN, or that a GGSN can act as an RSVP signaling proxy for a UE. Since Widegren doesn't recognize that the GGSN might or might not act as an RSVP proxy for the UE, it is not concerned with problems that can arise as a result. Furthermore, Widegren cannot be used to solve those problems.

The Office Action cites locations in Widegren at which limitations of the present invention are to be found. However, Applicants are unable to find the limitations at the cited locations. For example, the Examiner states that Widegren discloses a PCF capable of assigning responsibility for RSVP signaling to either the GGSN or the UE at Widegren column 13 line 17 to column 14 line 16. However, in the cited lines Widegren does not disclose a PCF with that capability. Rather, Widegren therein discloses a PCF which is interrogated by a GGSN to determine whether establishing an access network IP bearer service is permitted. According to Widegren, "In the GGSN, the bearer request is associated with a PCF, which the GGSN interrogates to determine whether establishing the particular access IP bearer service is permitted" (Widegren column 13 lines 56-59).

In Widegren column 13 line 17 to column 14 line 16, a scenario is described in which a remote host initiates a telephone call to a local UE using SIP signaling. Once a bearer is established, a "gate" is established at the GGSN which controls when data from the UE is permitted to enter the network, and the gate is controlled by data received from the application through the PCF. In column 14 lines 17-23, after the session is set up and when it reaches the "active phase" (i.e., in order to make the session active), a trigger is sent by the application (here, an SIP proxy

server) to the PCF and thence to the GGSN, to open the gate and allow the telephone call to proceed. No mention is made here or anywhere else in Widegren of assigning responsibility for RSVP signaling to one of the UE or the GGSN, nor of communicating that assignment not only to the responsible device, but to the other device as well, in order to avoid the problems described above associated either with both devices thinking they are responsible for the signaling, or with neither device thinking it is responsible. In stark contrast to the present application, nothing disclosed in Widegren anticipates or will prevent these problems.

Thus, Widegren does not provide or suggest the methods claimed in the present application for addressing potential problems that can arise when a GGSN acts as a proxy for a UE's RSVP signaling.

Williams is directed to establishing a proxy relationship between a protocol enabled network node and a non-protocol enabled host. For example, an RSVP session can be established by an RSVP proxy by a GGSN on behalf of a mobile terminal which is not RSVP enabled. In Williams, "the RSVP Proxy acts on behalf of the non-RSVP enabled node to facilitate resource reservation without that node having to be involved in the RSVP signaling. The problem addressed here is how to establish a protocol proxy relationship in a multimedia session involving a mobile communications access network and a non-enabled mobile terminal." (Williams [0012] last sentence to [0013] first sentence). The proxy relationship is initiated in Williams by the mobile terminal. However, Williams does not disclose or suggest a scenario in which both the mobile terminal and the GGSN are RSVP enabled, nor does Williams recognize or address the problems of such a scenario. In fact, Williams is explicitly directed to scenarios in which a non protocol-enabled terminal sets up a proxy relationship with a protocol-enabled network node precisely because it is not protocol enabled itself. Therefore, Williams effectively precludes using the

methods of the present invention for assigning RSVP signaling responsibility to either the GGSN or the UE, because in Williams the UE is not RSVP enabled.

Thus, neither Widegren nor Williams, alone or in combination, disclose or suggest either the problems solved by the present invention, or the methods the present invention uses to solve those problems.

Furthermore, Applicant notes that all of the inventors of the Williams et al. reference are also inventors of the Widegren et al. reference. Even if the references could be combined to arrive at the present invention (which they can not, as discussed above), Applicants believe it would be inappropriate for the Examiner to combine them when the inventors themselves, of necessity in actual possession of both references, did not themselves combine them, presumably because they found no motivation to do so.

Based on the arguments presented above, withdrawal of the rejection of claims 1-16 is respectfully requested.

Conclusion

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

In view of the foregoing amendment and remarks, Applicants respectfully submit that the present application, including claims 1-16, is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

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